

FHWA REGION NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
3	MD.	STPG-218-1(7)E	8	66

EQUIPMENT LISTS

A. EQUIPMENT TO BE SUPPLIED BY THE SHA.

QUANTITY	UNIT	SPECIFICATION SECTION	DESCRIPTION
1	EA	SP	BASE MOUNTED LOCAL CABINET (SIZE 5) LESS DETECTION EQUIPMENT WITH B PHASE ASC II CONTROLLER WITH TELEMETRY AND OPTICOM PRE-EMPTION MODULE
12	SF	813	FLAT SHEET ALUMINUM SIGNS CONSISTING OF: - 1 EACH R6-1L (36" X 12")-POLE MOUNT - 1 EACH W11-2g (36" X 36")-MAST ARM MOUNT

B. EQUIPMENT TO BE FURNISHED AND/OR INSTALLED BY THE CONTRACTOR.

QUANTITY	UNIT	SPECIFICATION SECTION	DESCRIPTION
5	CY	205	TEST PIT EXCAVATION
2	CY	206	REMOVAL OF EXISTING SIDEWALK
200	LF	SP 555	12 INCH WHITE PERMANENT PREFORMED PAVEMENT MARKING TAPE
40	LF	SP 555	24 INCH WHITE PERMANENT PREFORMED PAVEMENT MARKING TAPE
100	LF	SP	REMOVE EXISTING PAVEMENT MARKINGS-- ANY WIDTH
125	SF	610	4 INCH CONCRETE SIDEWALK
600	SF	SP	REMOVE AND REPLACE EXISTING BRICK SIDEWALK
1	EA	816	INSTALL CONTROLLER AND CABINET-- BASE MOUNT
12	SF	813	INSTALL OVERHEAD SIGN
2	EA	SP	FURNISH AND INSTALL 12 INCH 1 WAY 3 SECTION (R, Y, G) SIGNAL HEAD HAVING PROPER ADJUSTABLE MAST ARM BRACKET, AND TUNNEL VISORS-PAINTED BLACK
2	EA	SP	FURNISH AND INSTALL 12 INCH 1 WAY 2 SECTION PEDESTRIAN SIGNAL HEAD--PEDESTAL TOP MOUNT-- PAINTED BLACK
1	EA	SP	FURNISH AND INSTALL OPTICOM DETECTOR EYE-- MODEL 521
3	EA	811	FURNISH AND INSTALL ELECTRICAL HANDHOLE
5	CY	801	FURNISH AND INSTALL CONCRETE FOR SIGNAL FOUNDATION
175	LF	805	FURNISH AND INSTALL 2" SCHEDULE 40 RIGID PVC CONDUIT--TRENCHED
20	LF	805	FURNISH AND INSTALL 4" SCHEDULE 40 RIGID PVC CONDUIT--TRENCHED
425	LF	805	FURNISH AND INSTALL 2" SCHEDULE 80 RIGID PVC CONDUIT--SLOTTED
1	EA	807	FURNISH AND INSTALL CONTROL AND DISTRIBUTION EQUIPMENT
2	EA	817	FURNISH AND INSTALL PUSHBUTTON AND SIGN
1	EA	SP	FURNISH AND INSTALL 21--FOOT STEEL POLE WITH A SINGLE 38--FOOT MAST ARM-- PAINTED GREEN
1	EA	SP	CUT, CLEAN AND CAP TRAFFIC SIGNAL STRUCTURE
4	EA	804	FURNISH AND INSTALL GROUND ROD--3/4 INCH DIAMETER X 10--FOOT LENGTH
175	LF	810	FURNISH AND INSTALL NO. 6 AWG STRANDED BARE COPPER GROUND WIRE
400	LF	810	FURNISH AND INSTALL ELECTRICAL CABLE-- 1 CONDUCTOR (NO. 4 AWG -- THHN/THWN)
150	LF	810	FURNISH AND INSTALL ELECTRICAL CABLE-- 2 CONDUCTOR (NO 14 AWG)
150	LF	810	FURNISH AND INSTALL ELECTRICAL CABLE-- 3 CONDUCTOR (NO 14 AWG)
175	LF	810	FURNISH AND INSTALL ELECTRICAL CABLE-- 5 CONDUCTOR (NO 14 AWG)
2	EA	SP	FURNISH AND INSTALL 10--FOOT BREAKAWAY PEDESTAL POLE--PAINTED GREEN
125	LF	810	FURNISH AND INSTALL OPTICOM M-138 DETECTOR CABLE
3	EA	SP	REMOVE AND DISPOSE OF EXISTING FOUNDATION 12" BELOW GRADE
1	LS	SP	DELIVERY OF SALVAGED EQUIPMENT
1	LS	SP	REMOVE AND DISPOSE OF EXISTING EQUIPMENT
1	LS	SP	REMOVAL OF EXISTING SIGNAL EQUIPMENT TO BE SALVAGED

NOTE: ALL EQUIPMENT AND/OR MATERIALS TO BE REMOVED BY THE CONTRACTOR, BUT NOT LISTED BELOW, SHALL BECOME THE PROPERTY OF THE CONTRACTOR.

QUANTITY	UNIT	DESCRIPTION
1	EA	CONTROLLER AND CABINET
2	EA	PEDESTAL POLE AND BASE

NOTE: EXISTING RIGHT-OF-WAY BASED ON INFORMATION PROVIDED BY THE CITY OF HAGERSTOWN.

MDOT - STATE HIGHWAY ADMINISTRATION

Office of Traffic & Safety

TRAFFIC ENGINEERING DESIGN DIVISION

LOG M. 21W04036.02

DRAWN BY: M. GESELL

DES. BY: J. LAWRENCE

CHK. BY:

**US 40 West (West Franklin St.)
at U.S. Post Office**

COUNTY: WASHINGTON

DATE: 05/30/97

F.A.P. NO.

STPG-218-1(7)E

TS

NO.

SHEET NO.

S.H.A. NO. WA9535f85

3678

8 OF 66

PHASING DIAGRAM

	1	2	3	4	
	(R Y G)	(R Y G)	(H W W)	(H W W)	
PHASE 2	G	G	DW	DW	←
2 CHANGE	Y	Y	DW	DW	←
PHASE 4	R	R	W	W	←
4 PED CLEAR	R	R	FL DW	FL DW	←
4 CHANGE	R	R	DW	DW	←
PRE-EMPTION A	G	G	DW	DW	←
A CHANGE	Y	Y	DW	DW	←
FLASHING OPERATION	FL Y	FL Y	DARK	DARK	←

SIGNALS

1,2	3,4
(R Y G)	(H W W)
12"	12"

→ OPTICAL PRE-EMPTION
DETECTOR EYE

SIGNS

5	6
(WALKER)	(ONE WAY)
W11-2A 36"x36"	R6-1(L) 36" x 12"

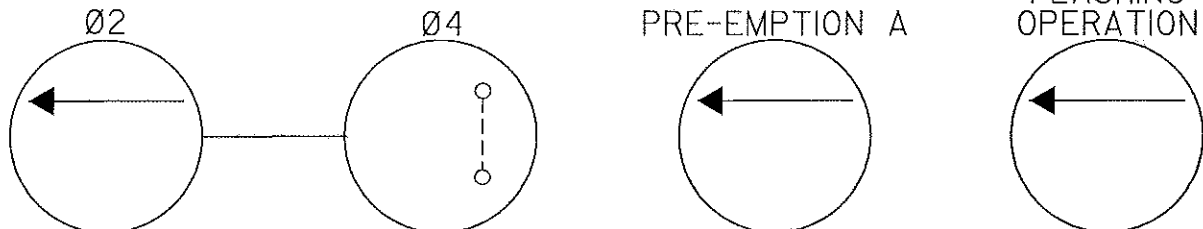
CONSTRUCTION DETAILS

- INSTALL 21' STEEL POLE, 38' MAST ARM, SIGNAL HEADS, SIGN AND OPTICOM DETECTOR (NOTE: 1-2", 90-DEGREE P.V.C. BEND).
- INSTALL 10' STEEL PEDESTAL POLE, PEDESTRIAN SIGNAL, PUSHBUTTON AND SIGN (NOTE: 1-2" 90-DEGREE P.V.C. BEND).
- REMOVE EXISTING PEDESTAL POLE, PEDESTRIAN SIGNAL, PUSHBUTTON, SIGN AND FOUNDATION.
- INSTALL BASE MOUNTED CABINET, SIZE #5, AND CONTROLLER WITH ALL NECESSARY EQUIPMENT AS SHOWN (NOTE: 2-4", 90-DEGREE P.V.C. BENDS; AND, 2-2", 90-DEGREE P.V.C. BENDS).
- INSTALL HANDHOLE.
- USE HANDHOLE INSTALLED AS PART OF U.S. 40 WEST (EAST/WEST FRANKLIN ST.) AT NORTH POTOMAC ST. CONSTRUCTION.
- USE HANDHOLE INSTALLED AS PART OF U.S. 40 WEST (WEST FRANKLIN ST.) AT JONATHAN ST. CONSTRUCTION.
- INSTALL 2" P.V.C. (SCHEDULE 40) ELECTRICAL CONDUIT (TRENCHED).
- INSTALL 2" P.V.C. (SCHEDULE 80) ELECTRICAL CONDUIT (SLOTTED).
- INSTALL 4" P.V.C. (SCHEDULE 40) ELECTRICAL CONDUIT (TRENCHED).
- REMOVE AND REPLACE EXISTING BRICK SIDEWALK.
- CONDUIT INSTALLED AS PART OF U.S. 40 WEST (WEST FRANKLIN ST.) AT JONATHAN ST. CONSTRUCTION.
- REMOVE AND REPLACE EXISTING CONCRETE SIDEWALK.
- REMOVE EXISTING CROSSWALK LINES.
- INSTALL 12" SOLID WHITE LINE FOR CROSSWALKS.
- REMOVE EXISTING STOP BAR.
- INSTALL 24" SOLID WHITE LINE.
- COIL 10' OF CABLE AT ELECTRICAL JUNCTION BOX. (COORDINATE CONNECTION DETAILS WITH THE CITY LIGHT DEPARTMENT).
- REMOVE EXISTING STEEL POLE, MAST ARM, SIGNALS, SIGNS, CABINET, CONTROLLER AND FOUNDATION.

UTILITY LEGEND

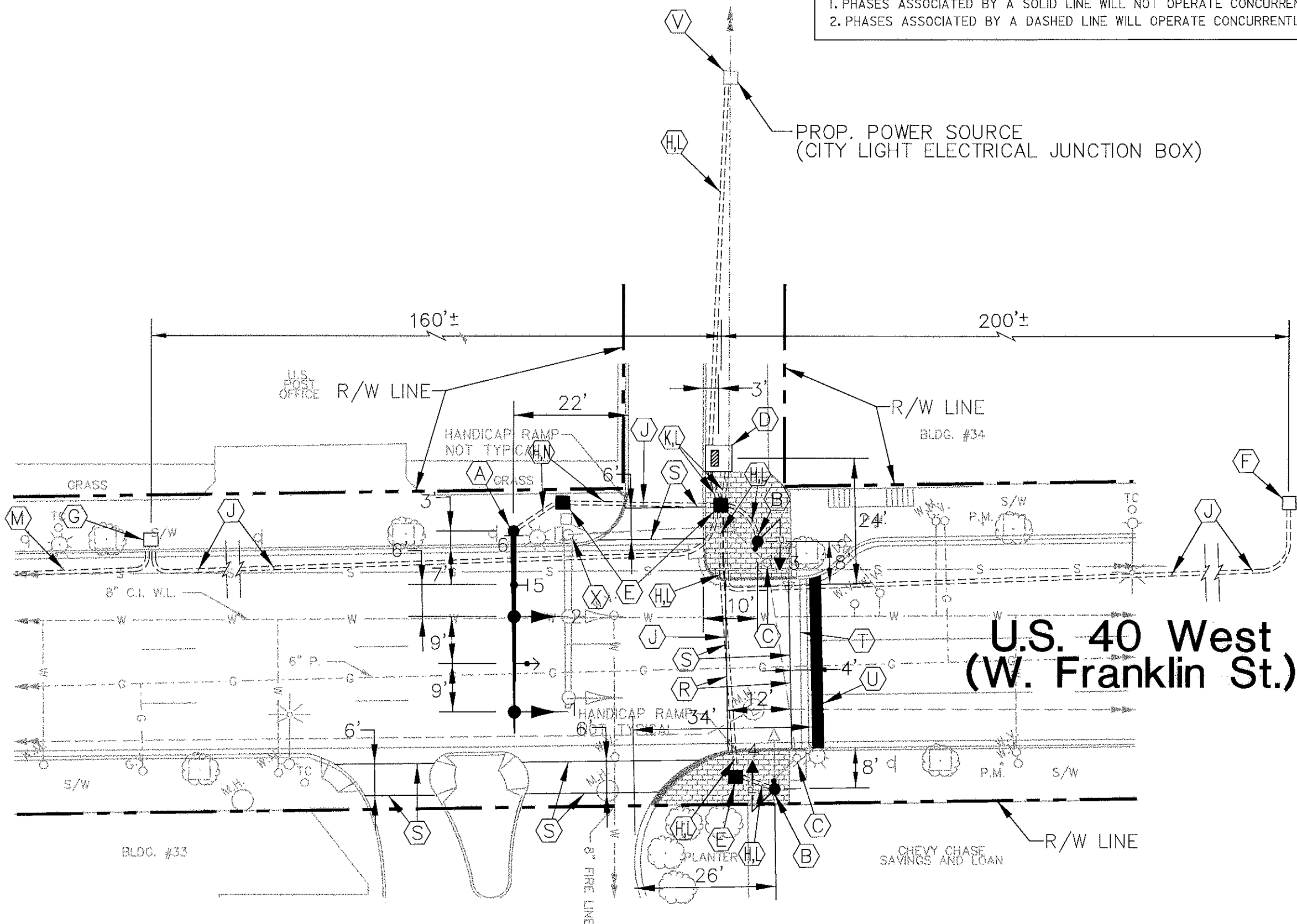
— G —	G	GAS MAIN
— W —	W	WATER MAIN
— S —	S	SEWER MAIN
— — — — —		STORM DRAIN
— TV —	TV	CABLE TELEVISION
— E —	E	ELECTRIC CABLES
— T —	T	TELEPHONE CABLES
— A —	A	AERIAL CABLES

NEMA PHASING



PHASING NOTES:

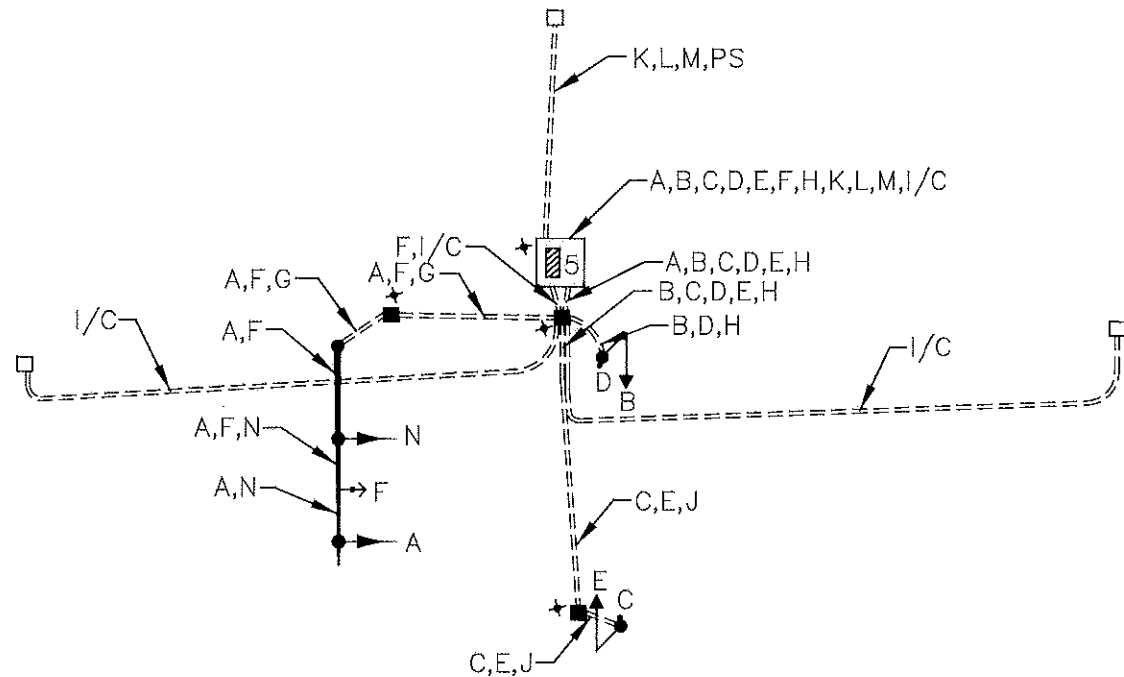
- PHASES ASSOCIATED BY A SOLID LINE WILL NOT OPERATE CONCURRENTLY
- PHASES ASSOCIATED BY A DASHED LINE WILL OPERATE CONCURRENTLY



WIRING DIAGRAM

WIRING LEGEND

- 5 CONDUCTOR CABLE (NO. 14 A.W.G.)
- 3 CONDUCTOR CABLE (NO. 14 A.W.G.)
- 3 CONDUCTOR CABLE (NO. 14 A.W.G.)
- 2 CONDUCTOR CABLE (NO. 14 A.W.G.)
- 2 CONDUCTOR CABLE (NO. 14 A.W.G.)
- 3M OPTICOM DETECTOR CABLE, MODEL 138
- STRANDED BARE COPPER GROUND WIRE (NO. 6 A.W.G.)
- STRANDED BARE COPPER GROUND WIRE (NO. 6 A.W.G.)
- STRANDED BARE COPPER GROUND WIRE (NO. 6 A.W.G.)
- 1 CONDUCTOR CABLE (NO. 14 A.W.G.)
- 1 CONDUCTOR CABLE (NO. 14 A.W.G.)
- 1 CONDUCTOR CABLE (NO. 14 A.W.G.)
- 5 CONDUCTOR CABLE (NO. 14 A.W.G.)
- 3/4"x10" GROUND ROD
- PROPOSED ELECTRICAL SERVICE
- INTERCONNECT CABLE



INTERSECTION DESCRIPTION

I. GENERAL

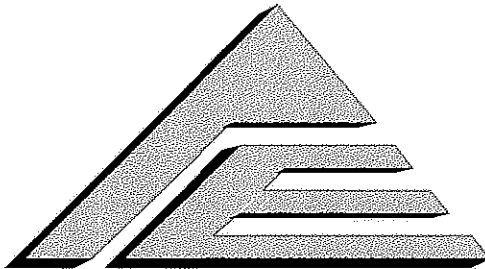
THIS INTERSECTION IS U.S. 40 WEST (WEST FRANKLIN ST.) AND THE PEDESTRIAN CROSSING AT THE U.S. POST OFFICE. CONSTRUCTION AT THIS INTERSECTION INVOLVES THE RECONSTRUCTION OF THE EXISTING TRAFFIC SIGNAL AND INTERCONNECTION WITH THE OTHER SIGNALIZED INTERSECTIONS IN THE NEW CITY-WIDE SYSTEM. IT IS ASSUMED THAT U.S. 40 WEST (WEST FRANKLIN ST.) RUNS IN AN EAST-WEST DIRECTION.

II. INTERSECTION OPERATION

THE INTERSECTION WILL OPERATE IN A NEMA TWO (2) PHASE PRE-TIMED MODE. WESTBOUND U.S. 40 WEST (WEST FRANKLIN ST.) AND THE PEDESTRIAN CROSSING WILL OPERATE IN SEPARATE PHASES. THE PEDESTRIAN SIGNALS WILL OPERATE UPON PEDESTRIAN ACTUATION.

PRE-EMPTION ON WESTBOUND U.S. 40 WEST (WEST FRANKLIN ST.) WILL CALL PRE-EMPTION A

A NEW EIGHT PHASE FULLY ACTUATED CONTROLLER WITH TELEMETRY MODULE, AND PRE-EMPTION HOUSED IN A GROUND MOUNTED CABINET WILL BE INSTALLED.



A/E GROUP, INC.

ENGINEERS • PLANNERS

181 E. Main Street
Westminster, Maryland 21158
A/E Job No. 95-289

APPROVALS

CHIEF, SIGNAL DESIGN SECTION

ASST. DISTRICT ENGINEER, TRAFFIC

CHIEF, TRAFFIC ENGINEERING DESIGN DIVISION

DIRECTOR, OFFICE OF TRAFFIC & SAFETY